

IN THE CLAIMS:

Claims 1 to 105 (cancelled)

5 106. (newly added) A method of protecting bankcard data and securely selecting any one of a plurality of bankcards of a customer at a merchant point of sale interface for a payment transaction to a merchant comprising the steps of:

10 a. selecting a debit card transaction requiring entry of a PIN in a merchant point of sale (POS) interface, entering of (i) a customer identifier, without customer identity data, by having a payment card that encodes the customer identifier and (ii) a bankcard specific personal identification number (CPIN) in the merchant point of sale (POS) interface;

15 b. sending the customer identifier and the CPIN, by the POS, to a merchant gateway, along with the payment transaction data that includes a merchant identifier and a payment amount;

 c. interfacing by the merchant gateway with a payment card system, and sending by the merchant gateway to the payment card system the customer identifier and the CPIN;

20 d. having stored customer bankcard data in the payment card system, wherein, each bankcard is identified with a separate CPIN, identifying a particular bankcard data of the customer and verifying the customer by the bankcard specific CPIN in the payment card system; and

25 e. returning to the merchant gateway the bankcard data corresponding to the customer identifier and the CPIN from the payment card system.

107. (newly added) The method as in claim 106, comprising further step of:

30 assembling a payment transaction record to include the bankcard data from the payment card system and the payment transaction data, and processing the payment

transaction by the merchant gateway by submitting a payment transaction record to a prior art bankcard authorization network.

108. (newly added) The method as in claim 106, comprising further steps of:

- a. having access to the payment card system by the customer;
- b. entering the bankcard data and self-selecting a CPIN for each of the bankcards of the customer.

109. (newly added) A payment card system that protects private data of a customer in customer to merchant payment transactions, comprising:

- a. a payment card with a substrate;
- b. a customer identifier that is without customer identity data, the customer identifier maps to the payment card system, the customer identifier is encoded with an algorithm and embeds a code that references the algorithm in the payment card system, for the customer identifier to be an encoded customer identifier;
- c. the substrate encoded with the encoded customer identifier and the substrate printed with an alias name selected by the customer.

110. (newly added) The payment card system as in claim 109, comprising:

the encoding medium is a magnetic strip.

111. (newly added) The payment card system as in claim 109, comprising:

the customer-identifier is self-created by the customer.

112. (newly added) The payment card system as in claim 109, further comprising:

a. the encoded customer identifier from the payment card used for a payment transaction at a merchant point of sale (POS), along with entry of a bankcard specific personal identification number (CPIN) by the customer are routed from the POS to an adapted prior art merchant gateway, the adaptation in the prior art merchant gateway routes the encoded customer identifier and the CPIN to the payment card system;

b. the payment card system decodes the encoded customer identifier using the algorithm that is referenced by the code present in the encoded customer identifier, the payment card system then maps the customer identifier and the CPIN to retrieve a specific bankcard data and returns the specific bankcard data to the adapted prior art merchant gateway.

113. (newly added) The payment card system as in claim 112, further comprising:

the adapted prior art merchant gateway assembles a prior art payment transaction using the specific bankcard data for submission of the prior art payment transaction to a prior art bankcard authorization network, thereby the payment card does not transfer customer identity data to the merchant POS.

114. (newly added) A method of conducting a payment transaction that protects the privacy of customer identity and bankcard data, comprising the steps of:

a. creating a customer identifier that is without customer identity data, the customer identifier maps to a payment card system;

b. encoding the customer identifier with an algorithm, and embedding a reference to the code that references the algorithm in the payment card system, thus getting an encoded customer identifier;

c. delivering to a customer, a payment card with a substrate printed with an alias name selected by the customer and encoded with the encoded customer identifier.

115. (newly added) The method as in claim 114, further comprising the steps of:

a. using the payment card for the payment transaction at a merchant point of sale (POS) and entering a bankcard specific personal identification number (CPIN) by the customer;

5 b. the POS routing a payment transaction record to an adapted prior art merchant gateway;

c. identifying the use of the payment card at the POS, by the adapted prior art merchant gateway, and routing the encoded customer identifier and the CPIN of the payment transaction to the payment card system.

10 116. (newly added) The method as in claim 115, further comprising the steps of:

decoding the encoded customer identifier by the payment card system using the algorithm that is referenced by the code in the encoded customer identifier, and using
15 the customer identifier and the CPIN, retrieving specific bankcard data in the payment card system, and returning to the adapted prior art merchant gateway.

117. (newly added) The method as in claim 116, further comprising the steps of:

20 enabling the adapted prior art merchant gateway to assemble a prior art payment transaction record for submitting the prior art payment transaction record to a prior art bankcard authorization network, wherein the payment card does not transfer customer identity data to the merchant POS.

25 118. (newly added) The method as in claim 114, further comprising the steps of:

a. using the payment card for the payment transaction at a merchant point of sale (POS) and entering a bankcard specific personal identification number (CPIN) by the customer;

b. connecting wirelessly by the merchant POS to the payment card system for routing a payment transaction record that includes a payment amount, a merchant identifier, a reference number, the encoded customer identifier, and the CPIN.

5 119. (newly added) The method as in claim 118, further comprising the steps of:

receiving wirelessly the payment transaction record by the payment card system.

120. (newly added) The method as in claim 119, further comprising the steps of:

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decoding the encoded customer identifier by the payment card system using the algorithm that is referenced by the code in the encoded customer identifier, and using the customer identifier and the CPIN, retrieving specific bankcard data in the payment card system.

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121. (newly added) The method as in claim 120, further comprising the steps of:

assembling a prior art payment transaction record with the specific bankcard data, the prior art payment transaction record includes, a customer name, a bankcard
20 number, an expiration date, the merchant identifier, the payment amount, and the reference number, and submitting the prior art payment transaction record to a prior art card authorization network via a prior art merchant gateway.

122. (newly added) The method as in claim 121, further comprising the steps of:

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receiving a payment approval record from the prior art card authorization network via the prior art merchant gateway, that includes the reference number, the payment amount and a payment authorization number, and forwarding wirelessly the payment approval record to the merchant POS, wherein the payment card does not transfer
30 customer identity and bankcard data to the merchant POS.

123. (newly added) A payment security system that provides identity security in use of bankcards, comprising:

a. a customer identifier that is without customer identity data;

b. the customer identifier maps to a plurality of bankcard data of the customer, each bankcard data identified with a card specific personal identification number (CPIN) in the payment security system;

c. the customer identifier encoded with an algorithm from a list of such algorithms in a database maintained by the payment security system and referenced by a code, the encoded customer identifier embeds the algorithm reference code, is then encoded on a payment card encoding mechanism, wherein the payment card and the CPIN is used by the customer at a merchant point of sale (POS) of a merchant system for conducting a payment transaction.

124. (newly added) The payment security system as in claim 123, further comprising:

on swiping of the payment card and entry of the CPIN, the payment security system receives from the merchant POS, the encoded customer identifier and the CPIN, decodes the encoded customer identifier, using the customer identifier and the CPIN selects the specific bankcard data of the customer for processing the payment transaction with a prior art bankcard processing network, wherein, the security system does not transfer the customer and customer bankcard data to the merchant system.